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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/867,685	05/31/2001	Susumu Takahashi	20-115	7220

7590 11/06/2003  
Arnold International  
P.O. Box 129  
Great Falls, VA 22066-0129

EXAMINER

PATEL, NITIN

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 11/06/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/867,685

Applicant(s)

TAKAHASHI, SUSUMU

Examiner

Nitin Patel

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 August 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-32 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-32 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-7,10-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinberger et al., (U.S. Patent No. 6,252,707 in view of Karasawa (U.S. patent No. 6,040,945).

As per claims 1,10,11,12,13,14,15,17,20,26,27,28,29,30,31 Kleinberger shows a display means that displays left and right images at respective left and right position on a display panel (In Fig.2), the left and right images being partially overlapped on the display panel (In fig.3); a optical system having left and right optical viewing systems with respective optical axes that are aligned substantially parallel with one other (In fig.5, 8,9), the left optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the right optical viewing system, and the right optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the left optical viewing system; wherein of the left and right images displayed on the display panel only the left images are viewable at the left exit pupil and only the right images are viewable at the right exit pupil (in col.25 lines 1-35 and In col.26 lines 12-25).Kleinberger does not show a magnifying optical system. Karasawa shows an optical magnifying system (in fig.1a and In col.3 lines 40-50). It would have been obvious to

one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Karasawa's into system of Kleinberger's because it would have magnifying image to a virtual image to be observed with one of to a eyes of the user.

As per claim 2, the left and right images have polarization which are independent of each other; the left and right optical viewing systems of the optical magnifying system have polarization which are independent of each other; the polarization of the right image is the same as the polarization of the right viewing system, and the polarization of the left image is the same as the polarization of the left viewing system (In col.27 lines 5-24).

As per claim 3, the display means display the left and right images alternately on the display panel in a time multiplexed manner and the displaying of the left and right images synchronized with a switching operation between the left and right optical viewing systems so that the right optical viewing system forms only right image and the left optical viewing forms only the left images (In col.29 lines 30-50).

As per claims 4, the display means displays the left and right images using different wavelength of light which do not overlap and the optical magnifying system includes optical elements which operates on a light beam or do not operate on a light beam depending on the wavelength of the light beam, such that the left optical viewing system forms left images and does not right images and the right optical viewing system forms right images and does not form left images (In Col.44, 45).

As per claims 5,6,7,13,16 the distance between the exit pupils is adjustable by changing the distance between the left and right viewing systems, which changes the

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distance between the left and right displayed images and one of the distance between the left and right displayed images and the distance between the left and right viewing system is separately adjustable (In col.30 lines 20-67).

As per claim 11,14,17,18,19,21-25 a display means that displays left and right images at respective left and right position on a display panel, the left and right images being partially overlapped on the display panel; a optical magnifying system having left and right optical viewing systems with respective optical axes that are aligned substantially parallel with one other, the left optical viewing system having an exit pupil and an effective aperture that includes the optical axis of the right optical viewing system, the left and right optical viewing having different polarization, different wavelength or time division forms only right images, the left image and the left optical viewing system share a first common polarization wavelength or time division and right image optical viewing system share a different polarization wavelength(In Col.58 lines 20-60).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8,9,32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kleinberger et al., (U.S. Patent No. 6,252,707) in view Karasawa (U.S. patent No. 6,040,945) in further view of Waldern et al., (U.S. patent No. 6,407,724).

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As per claims 8,9,12 Klienberger shows a left and right optical axes to switch on and off in a time division manner (In col.29 lines 30-50) Klienberger and Karasawa does not show holographic optical element. Waldern shows holographic element in display device (3-D)(In Abstract and In Col.8 lines 37-50). It would have been obvious to one of ordinary skill in the art, at the time of the invention was made to allow the teaching of Waldern's into combined system display of Klienberger's because it would have used in a range in which the phase or amplitude modulation varies substantially linearly with applied stimulus.

### ***Conclusion***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nitin Patel whose telephone number is 703-308-7024. The examiner can normally be reached on 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin H Shalwala can be reached on 703-305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-308-9052 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-9618.

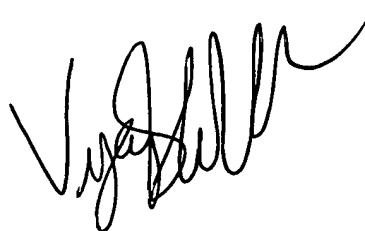
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NP

November 3, 2003

A handwritten signature in black ink, appearing to read 'Vijay Shankar', with a stylized, cursive script.

**VIJAY SHANKAR**  
**PRIMARY EXAMINER**